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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,012	10/28/2003	Salvatore Pagano	P10-1289 DIV	6505

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Felipe J. Farley
Patent Department
Michelin North America Inc.
515 Michelin Road
Greenville, SC 29605

EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,012

Applicant(s)

PAGANO ET AL.

Examiner

Justin R. Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,6,8-10,13,14,16;22 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,11,12,15 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, 11, 12, and 14-23, drawn to a rubber product containing at least one iron (III) salt, classified in class 428, subclass 98+.
 - II. Claims 8-10 and 13, drawn to a tire casing incorporating a rubber product containing at least one iron (III) salt, classified in class 152, subclass 450.
2. Inventions I and II are related as combination and subcombination. Here, the combination (Invention II) recites particular characteristics of the subcombination (Invention I), including a rubber product containing an iron salt, but there is evidence that the particular characteristics of the subcombination are not essential to the combination. The characteristics of the tire cover, including a calendaring rubber internal to a carcass ply that extends from one bead wire to the other, crown plies external to the carcass ply, side walls exterior to the carcass that end in beads comprising at least one bead wire, and a tread exterior to the crown plies, can be used as a basis for showing that the rubber product incorporating an iron (III) salt does not constitute the sole distinguishing novelty in the combination.
3. Upon election of Invention I, the following species restriction is applicable.

This application contains claims directed to the following patentably distinct species of the claimed invention: a rubber product comprising at least one iron (III) salt of:

Specie I: cyanobenzoic acid

Specie II: an alkylbenzoic acid

Specie III: a toluic acid

Specie IV: an alkoxybenzoic acid

Specie V: naphthoic acid.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior

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art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Alan Csantos on April 26, 2005 a provisional election was made with traverse to prosecute the invention of a rubber based product having an iron (III) salt of an aromatic carboxylic acid, wherein said acid is an alkylbenzoic acid, claims 1, 3, 5, 7, 11, 12, 15, and 17-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2, 4, 6, 8-10, 13, 14, 16, 22, and 23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 5, 7, 11, 12, 15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masson (WO 99/24502) and further in view of Hata (US 3,309,418) and Ebner (US 6,387,461). It is initially noted that if a claim in a continuation-in-part application recites a feature which was not disclosed or adequately supported by a proper disclosure under 35 U.S.C. 112 in the parent nonprovisional application, but was first introduced or adequately supported in the continuation-in-part application such a claim is entitled only to the filing date of the continuation-in-part

application (See MPEP 201.11). In this instance, the parent application (of 10/007,601) fails to describe the inclusion of an iron (III) salt of an aromatic monocarboxylic acid as set forth in claim 1. This position is being set forth in light of the petition filed to correct the priority claim in the parent application (10/007,601).

Masson (Page 5, Paragraph 5) teaches a pneumatic tire construction (product comprising rubber) including (i) a calendaring rubber internal to a carcass ply, (ii) crown plies, (iii) sidewalls exterior to the carcass, and (iv) a tread, wherein at least one buffer zone for trapping oxygen is provided in the form of a rubber layer having an iron (III) salt of an aliphatic carboxylic acid (number of carbon atoms of carboxylic acid between 6 and 23). While Masson only discloses the use of aliphatic carboxylic acids (e.g. hexanoic, lauric, stearic), it is extremely well known in a variety of industries to form metal salts, including iron salts, from aromatic carboxylic acids, as shown for example by Hata (Column 1, Lines 65-68 and Column 2, Lines 12-33) and Ebner (Column 4, Line 66 – Column 5, Line 20). More, specifically, Hata and Ebner recognize the ability to interchange the specific carboxylic acid (aliphatic or aromatic) and still form a suitable metal salt for use in a given composition. It is particularly noted that the iron metal salts of Ebner, formed of either aliphatic or aromatic carboxylic acids, are included in an oxygen scavenging composition in an analogous manner to the claimed invention. Thus, since aliphatic and aromatic carboxylic acids are recognized as alternative carboxylic acids in the formation of metal salts, one of ordinary skill in the art at the time of the invention would have found it obvious to form the iron (III) metal salt of Masson from an aromatic carboxylic acid and only the expected results would be achieved (that

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being an improved oxygen fixation property as compared to common additives). It is further noted that applicant has not provided any unexpected results to establish a criticality for an iron (III) salt formed of an aromatic carboxylic acid and as such, the particular selection of an aromatic carboxylic acid would have been within the purview of one of ordinary skill in the art at the time of the invention, especially in view of Hata and Ebner.

As to claim 7, the iron salt of Masson is included in an amount between 0.01 and 0.03 phr of iron equivalent (Page 3, 6th Paragraph).

With respect to claim 11, Masson specifically states that the incorporation of said iron (III) salt (by mechanical work) results in improved rolling resistance (Abstract).

Regarding claim 12, Masson suggests the inclusion of a reinforcing filler (Page 17, claim 13).

As to claims 3, 5, 15, and 17-21, it would have been within the purview of one of ordinary skill in the art at the time of the invention to select any of the well known aromatic carboxylic acids in view of the general teachings by Hata and Ebner, in which the use of aliphatic and aromatic carboxylic acids are recognized as alternatives in the formation of iron salts. In particular, both Hata and Ebner recognize the well known use of benzoic acids- while butyl benzoic acid or methoxy benzoic acid is not specifically mentioned, one of ordinary skill in the art at the time of the invention would have found it obvious to select any of the well known benzoic acids absent any conclusive showing of unexpected results. It is emphasized that Hata and Ebner provide a general recognition that benzoic acids represent a suitable carboxylic acid in the formation of iron salts.

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Also, as is well known, the carboxylic acids can be substituted or unsubstituted, as shown for example by Hata (Column 2, Lines 33-36) and Ebner (Column 5, Lines 15-20), wherein cyano and alkoxy substituents are common and extensively used with carboxylic acids. Additional substituents would have been within the purview of one of ordinary skill in the art at the time of the invention. Lastly, the claims as currently drafted (18-21) do not require the aromatic ring (of the carboxylic acid) to be substituted as it is an optional limitation.

Lastly, it is noted that the results of Tables 1-3 are not persuasive in establishing a criticality for the use of an aromatic carboxylic acid as opposed to an aliphatic carboxylic acid. In particular, the inventive compositions are compared to compositions having cobalt salts and iron acetylacetonate, not iron salts formed of aliphatic carboxylic acids. Thus, it is evident that the data in Tables 1-3, as noted above, do not provide a conclusive showing of unexpected results for the claimed aromatic carboxylic compound.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script that reads "Justin Fischer".

Justin Fischer

April 26, 2005